

**Climatological Data for July, 1910.**  
**DISTRICT No. 12, COLUMBIA VALLEY.**

EDWARD A. BEALS, District Editor.

July was the fifth consecutive month with a deficiency in precipitation, and while this month is ordinarily very dry there are usually a few days with rain in the driest sections, and moderate falls occur elsewhere. This year, however, over 100 stations reported no rain in measurable quantities, and the drought was so severe on the ranges as to cause a scarcity of feed and some suffering among stock, but no losses. The streams all became unusually low, as noted elsewhere, and navigation was suspended on the Snake River and on the upper stretches of the Willamette River. The forest floors became so dry that many fires were started, some by campers, some by lightning, some by sparks from locomotives, and in other ways until, near the end of the month, the sky was very smoky. The fires were most numerous and damaging in the Flathead country in Montana, the Colville country in Washington, and in and about the Coeur d'Alene section of Idaho. No very destructive fires occurred in Oregon, but a number of small ones broke out in the Blue Mountain Reserve in Wallowa County, and along both slopes of the Cascade Mountains, which required considerable attention, and many of them were still burning at the end of the month. In the Coast Range of Mountains the fires were mostly confined to slashings and second growth timber which burned furiously for a while without doing much damage. Most of the fires started during a dry spell between the 5th and 11th. Showery conditions prevailed on the 20th, 21st, and 22d, and many of the fires were either put out or checked at that time. Those that continued to burn, and those that started later, were aided by the dry weather which followed and at the end of the month the conditions were favorable for the spreading of the fires in all sections of the Columbia Valley. Three lives were lost by forest fires, and it is impossible to estimate the property loss which very likely has been greatly overestimated in the newspapers. It has been a long time since a season so favorable for forest fires has occurred, and that the losses are not greater is due to the organized effort that has been made to fight them, and to the laws that have been enacted with a view toward making people careful about putting out fires that have been started for necessary purposes.

**TEMPERATURE.**

The mean temperature, as determined from the records of 229 stations, was 67.7°, which is 0.7° above the district average. Along the coast of Oregon, and in Washington, west of the Cascade Mountains and also in the south central portion, the mean temperatures were generally below the normal. Elsewhere, with the exception of some local differences, the departures ranged usually above the seasonal average. The greatest departure below the normal was -5.5° at Fairview, Oreg., in the coast drainage area at an elevation of 142 feet, and the greatest departures above were in the extreme eastern portion of the district, where in western Montana and eastern Idaho the departures were, in some instances, as great as +3.7°, +4.2°, and +4.7°.

The warmest sections were in the central portion of the Snake River Valley, where mean temperatures of 75° to 81° occurred, and along the central portion of the Columbia River course in Washington and Oregon, where the mean temperatures were 75° to 78°. The coolest sections were along the sea coast and in the elevated portions of the interior.

The weather was relatively cool during the first five days of the month and, except in the central portion, or that part lying between the Rocky and the Cascade mountains, from the 23d to the 31st, and the minimum temperatures for the month were generally recorded during the first or third decades.

In some localities in the interior freezing temperatures were recorded during these periods and frost formed. The warmest weather occurred throughout the district during the second decade, and in central sections also during the latter half of the third decade.

The highest mean temperature was 81.1° at Garnet, Idaho, on the watershed of the middle Snake, at an elevation of 2,575 feet, and the lowest was 54.0° at Tatoosh Island, in northwestern Washington, at an elevation of 86 feet. The highest recorded temperature was 110° at Garnet, Idaho, on the 13th, and also at Glenns Ferry, Idaho, on the 13th and 17th; both stations are in Elmore County, in the middle Snake basin, at elevations above 2,560 feet. The lowest recorded temperature was 22° at Range, Oreg., in the Blue Mountains at an elevation of 3,500 feet, on the 4th.

**PRECIPITATION.**

The average precipitation, as determined from the records of 338 stations, was 0.22 inch, which is slightly more than half an inch below the normal amount. The deficiencies were more than 1 inch in portions of the coast drainage area in northwestern Oregon, in portions of the coast and the Puget Sound drainage areas in northwestern Washington, and in the Columbia River Basin in northeastern Washington and in central western Montana. The only excesses occurred at Jacksonville, Oreg., in the Rogue River Basin, at an elevation of 1,640 feet; at La Grande, Oreg., in the Blue Mountains, at an elevation of 2,784 feet; at Ovando, Mont., near the headwaters of the branches of the Columbia, at an elevation of 4,207 feet, and at Afton and Bedford, both in Uinta County, Wyo., in the upper Snake drainage basin, at elevations of 6,200 feet and 5,900 feet, respectively. In Oregon and Washington the precipitation occurred mostly from the 14th to the 22d, inclusive, but in the eastern sections of the district the rainfall was better distributed through the month, in Idaho, western Wyoming, northern Utah and northern Nevada, the rainless periods being, approximately, from the 5th to 11th, and from the 23d to 25th, while in Montana they were from the 5th to 7th, 10th and 11th, the 19th, and 24th to 28th.

The greatest monthly precipitation was 1.77 inch at Edie, Idaho, in the Lost River Basin, and none occurred at 56 stations, while 45 stations reported only a trace. The greatest 24-hour rainfall was 1.20 inch on the 20th at Grindstone, Oreg., in the Deschutes Basin, at an elevation of 5,000 feet. A fall of 1 inch occurred on the 4th at Cottonwood Creek, Idaho, on the Boise River watershed, at an elevation of 4,000 feet.

**THE RIVERS.**

The deficient rainfall over the district during July is shown in the quite uniformly decreasing river stages throughout the month. Streams in many sections were lower than they have ever been known to be before, for which reason the placer mining season was shorter than usual. Some lumber mills were compelled to shut down temporarily owing to there not being sufficient water in the streams to permit the floating of logs to the mills; and in some recently constructed irrigation ditches the flow of water was insufficient for agricultural purposes, the reserve supply being inadequate on account of the marked dryness of the present summer season.

*The Columbia.*—With one or two exceptions the present July stages along the Columbia River were the lowest mean stages recorded in 7 years, as determined from data for those stations having long records, while at The Dalles this was the first time such a low stage was reached in July. As compared with past years' records, the average for the month ranged between 2.9

feet below the normal at Celilo and 9.7 feet below at The Dalles, while at Umatilla the departure from average conditions was -3.9 feet; at Vancouver, -5.7 feet; at Wenatchee, -5 feet, and at Northport, -6.9 feet. As compared with the height of the water during the preceding month, the mean stage was 5.5 feet lower at Vancouver, 4.5 feet lower at Umatilla, 6.2 feet lower at Wenatchee, and 6.5 feet lower at Northport. The river fell quite steadily throughout the month, and the lowest stages were recorded on the 30th or the 31st. Navigation continued unimpeded throughout the month.

*The Snake.*—The mean of the daily stages at the several stations for the month averaged 4.4 feet below that for June, and it was 5.4 feet below the normal for July. The water continued to fall steadily throughout the month, and the lowest stages were recorded on the 31st. At Lewiston, the river fell from a stage of 3.2 feet on the 1st to one of 0.6 foot on the 31st, and the mean stage was only 1.7 foot. None of the regular steamboats operated on this river during July.

*The Willamette.*—The mean stage of the Willamette River ranged between 0.3 foot below the normal at Salem and 4.7 feet below at Portland, and was 0.8 foot below at Albany. The July mean stages were uniformly lower than those for the preceding month at all stations, being 0.7 foot lower at Albany, 1 foot lower at Salem, 1 foot lower at Wilsonville, and 5.3 feet lower at Portland. The greater difference as shown for Portland is due to the stage of the river at that place being influenced by the varying conditions of both the Columbia and the Willamette. As a rule there was a gradual decrease in the river stages at all stations throughout the month, the highest readings generally occurring on the 1st and the lowest on the 31st.

The upper Willamette is at the lowest stage ever known since it has been used as a commercial highway. When the river is at a fairly good stage the boats go as far as Corvallis, usually spoken of as the "head of navigation," and during high water the steamboats are able to go through to Eugene, 52 miles above Corvallis, and 171 miles from Portland. The present low water prevents boats from making regular trips beyond Newberg, and as the time was favorable for such survey, officials of the Oregon City Transportation Company during the last of the month made the trip from Eugene to Newberg in a rowboat for the purpose of examining and recharting the shoals for the benefit of their boatmen.

#### MISCELLANEOUS PHENOMENA.

The prevailing winds for the month were from the west and, as a rule, the velocities were low. A strong southwest wind prevailed all over the State of Washington on the 21st; a maximum velocity of 42 miles, the highest for the month in this district, being recorded at Spokane.

The amount of sunshine received over the district was above the average for July; the percentage of possible sunshine being 76 at Portland, 65 at Seattle, and 88 at Spokane. During the first half of the month the atmosphere was clear, but later it became quite smoky, due to numerous forest fires.

Severe thunderstorms occurred in eastern Oregon and southern Idaho on the 19th, 20th, and 21st, causing a loss of two lives and considerable property. Several forest fires were started by lightning and in many cases the storms were accompanied by hail. Killing frosts were reported at a few stations in high altitudes.

#### NEWS ITEMS.

By EDWARD L. WELLS, Section Director, Boise, Idaho.

The contract has been let by the United States Reclamation Service for enlarging the main south side canal leading from the Boise River diversion dam to the Deer Flat Reservoir. The function of this canal is to supply lands lying directly under it and to feed the Ridenbaugh Canal and Deer Flat Reservoir. In its present condition this canal has a carrying capacity of less than 1,200 second-feet, but is to have an ultimate capacity

of about 2,500 second-feet for use of the new lands of the project, requiring a bottom width of earth section of 70 feet and a height of bank above canal grade of 12 feet with  $1\frac{1}{2}$ :1 side slopes.

In considering the question of enlargement of the canal to the full width, it has been found that certain of the 40-foot bottom width sections subject to excessive seepage and liability to breaks can be lined with concrete with about the same amount or less expenditure than the sections could be widened for and that such lined sections will have a carrying capacity equal to, if not greater than, the 70-foot bottom width earth sections. The total length of these sections amounts approximately to 36,000 linear feet of the canal. About 10,000 feet of the most dangerous stretches were lined during the fall of 1909, and it is proposed that the remaining distance will be completed in approximately equal amounts during the falls of 1910 and 1911, the most dangerous parts being finished this fall. With these dangerous sections of the canal lined with concrete, the canal will be in splendid condition to resist both seepage and serious interference from breaks.

With this work completed, the main canal will be able to serve the Deer Flat Reservoir and all the lands of the project as they are developed by extensions of the lateral system.

E. K. Taylor, General Manager of the Dry Creek Irrigation Project, gives the following notes relative to the same. The irrigation system contemplates the reclamation of 20,000 acres of desert land in T. 10 and 11 N., R. 24 E., B. M., as a private enterprise. Canals are already constructed to irrigate 2,500 acres of land. There is sufficient water in Dry Creek during the months of June and July, when the amount of snowfall during the preceding winter is normal, to irrigate 6,000 acres of land. The system, when completed, contemplates the construction of a storage reservoir, there being a natural reservoir site 4 miles from the land to be irrigated, where engineers estimate that a dam 150 feet high will store 42,360 acre-feet of water. The dam will be 60 feet long at the bottom, 115 feet long at a height of 100 feet, 400 feet long at a height of 128 feet, and 800 feet long at 150 feet.

Considerable attention is being given to the pumping of water for lands lying too high to be reached by gravity systems. A pumping plant has recently been installed by the Payette Heights Irrigation Company to reclaim about 4,000 acres of land just above the town of Payette, Idaho. The initial installation consists of Byron Jackson pumps driven by two 75-horsepower Fairbanks-Morse motors. It is planned ultimately to make use of 1,000 horsepower. The water is taken from the lower Payette Ditch, raised 130 feet and turned into the Payette Heights Ditch. There will be smaller units installed in the High Line Ditch to pump the water to still higher lands. The ditch and pumping plant were put in by the cooperation of the land owners. It is estimated that the water will cost about \$5 per acre per season. The land to be reclaimed is in the heart of the fruit belt.

Contracts have been awarded for the construction of the Jerome Reservoir of the Twin Falls North Side project. This reservoir will have a capacity of 150,000 acre-feet and will cost, approximately, \$500,000. The maximum height of the dam will be 40 feet.

The breaking of the temporary dam at Jackson Lake, Wyoming, caused some loss of water in Snake River.

A survey has recently been made for a reservoir site on Mann Creek in Washington County, Idaho, and it is reported that a satisfactory site has been found.

Plans are being made for two great irrigation systems in southern Idaho. One of these comprehends the reclamation of several hundred thousand acres in the Bruneau Valley by an extension and enlargement of the Twins Fall Canal. The water is to be provided by impounding the flood waters of Snake River in a gigantic reservoir above American Falls.

Another looks to the reclamation of a still larger tract lying between Boise and Mountainhome, with water stored at the head of the Salmon River and brought under the Sawtooth Mountains in a tunnel.

The United States Reclamation Service is making extensive surveys and test borings for reservoir sites in the Boise watershed to augment the water supply for the Payette-Boise project.

The question of drainage of irrigated lands is engaging the attention of engineers in southern Idaho. The United States Reclamation Service is constructing a drainage system for the North Side Minidoka Project, near Rupert, and steps are being taken to attend to the matter of drainage in the Pioneer Irrigation District. In close connection with this is the problem of water conservation. Mr. Don H. Bark, of the United States Department of Agriculture, is conducting an elaborate system of experiments looking to a more economical use of water.

Several small power plants are being constructed on the Payette River in Long Valley. One of these, at Tamarack Falls, will supply power to the town of Roseberry, and another at Van Wyck Falls will furnish power for Van Wyck, Crawford, and Thunder City.

#### REPORT ON THE ANNUAL RISE IN THE COLUMBIA RIVER, 1910.

By T. F. DRAKE, Assistant Observer, Portland, Oreg.

There are two principal causes that operate to produce the annual spring rise in the Columbia River: The accumulated depth of the winter's snow in the mountains and foothills at the close of the cold season, and the effect of the subsequent temperatures upon the melting of this snow. An abundance of snow in the higher levels at the end of winter, and an early spring with steady warm or mild weather, will obviously cause an earlier annual rise of approximately shorter duration, and higher river stages than usual, while, under similar snowfall conditions, if the temperatures of spring are divided into periods of alternately warm and cool spells, it is evident that the annual rise will extend through a longer period of time and the maximum stages reached will not be so great.

TABLE 1.—Monthly and seasonal snowfall at selected stations.

	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	Seasonal.
<i>Montana.</i>	<i>Inches.</i>	<i>Inches.</i>	<i>Inches.</i>	<i>Inches.</i>	<i>Inches.</i>	<i>Inches.</i>	<i>Inches.</i>
Bison Mountain.....	21.7	35.2	19.0	73.5	12.0	6.0	188.2
Fortine.....	2.5	16.0	14.8	22.0	2.0	T.	57.3
Hat Creek.....	10.3	17.9	9.6	29.9	2.3	4.5	83.7
Kalispell.....	4.1	9.1	8.8	19.1	4.1	2.1	47.3
Ophir.....	9.0	10.0	0.5	8.5	1.0	4.0	41.5
Philipsburg.....	6.3	4.3	9.5	24.7	T.	2.0	49.8
Saint Ignatius.....	2.0	6.2	4.2	20.6	T.	0.5	33.7
Saint Regis.....	3.6	3.3	11.4	38.7	0.0	0.0	57.0
Saltese.....	3.0	21.0	50.0	72.5	14.0	5.0	165.5
<i>Idaho.</i>							
Blackfoot Dam.....	14.4	17.5	24.0	25.0	6.0	1.0	87.9
Burke.....	19.5	23.0	58.5	89.0	13.0	9.5	212.5
Loon Creek.....	8.0	14.0	22.1	25.3	4.5	0.5	74.4
Eddie.....	10.0	9.0	21.0	40.0	0.0	4.0	84.0
McCall.....	11.2	30.5	30.0	23.0	3.0	0.0	97.7
Silver City.....	17.4	26.5	15.9	30.1	1.2	T.	91.1
Pine.....	5.0	40.0	48.6	24.0	0.0	.....	117.6
Pyle Creek.....	6.9	32.3	61.5	48.8	0.0	T.	149.5
Average.....	9.1	18.6	24.1	36.2	3.7	2.4	58.4

Reports received early in April from Weather Bureau sources indicated that the snowfall at the headwaters of the Snake River, in Idaho and Wyoming, and at the headwaters of the branches of the Columbia in Montana during the winter had been heavier than usual, while reports from the Canadian Meteorological Service showed less than the usual amount for the winter over the Columbia River watershed in British Columbia. The accompanying table shows the snowfall conditions that obtained at selected stations in Montana and Idaho during the principal snowfall months. The comparatively heavy snowfall of December, January, and February especially, is here shown, and it will be noted that the accumulated snow on the ground at the end of February was only about 6 inches less than the total snowfall for that month. A study of Tables 1 and 2, in connection with Table 3, will be very

interesting, since the chief conditions affecting the river stages are indicated in the tables in a manner that permits of their being readily seen and appreciated. It should, however, be borne in mind that the figures given for the depth of the snow blanket at the end of March, and also at the end of April, do not represent the amount of snow gathered in drifts in the canyons and ravines in the higher levels; otherwise it might be difficult to explain satisfactorily why the highest river stages occurred this year in May. It may be mentioned that snow fell in some localities as late as May in considerable quantities.

TABLE 2.—Accumulated depth of snow on ground at end of month.

	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
<i>Montana.</i>	<i>Inches.</i>	<i>Inches.</i>	<i>Inches.</i>	<i>Inches.</i>	<i>Inches.</i>	<i>Inches.</i>
Bison Mountain.....	6.0	27.0	20.6	48.0	12.0	0.0
Fortine.....	0.0	5.0	T.	4.0	0.0	0.0
Hat Creek.....	0.4	12.5	7.0	18.0	0.0	.....
Kalispell.....	0.0	2.2	0.0	6.3	0.0	0.0
Ophir.....	0.0	2.5	2.0	10.0	0.0	0.0
Philipsburg.....	0.0	0.0	0.0	3.0	0.0	0.0
Saint Ignatius.....	0.0	0.5	10.0	8.5	0.0	0.0
Saint Regis.....	0.0	14.0	30.0	68.0	24.0	0.0
Saltese.....						
<i>Idaho.</i>						
Blackfoot Dam.....	6.8	23.0	24.0	34.0	5.0	0.0
Burke.....	0.0	15.0	39.0	76.0	5.0	0.0
Loon Creek.....	4.0	13.0	18.5	31.0	0.5	0.0
Eddie.....	5.0	9.0	30.0	16.0	0.0	0.0
McCall.....	T.	29.0	36.0	55.0	24.0	0.0
Silver City.....	0.0	2.0	11.8	30.0	0.0	0.0
Pine.....	0.0	25.0	34.0	36.0	0.0	.....
Pyle Creek.....	0.0	17.5	31.0	40.0	0.0	0.0
Average.....	1.5	12.3	18.3	30.2	4.4	0.0

\* No record.

In all sections the weather during March was comparatively mild, the temperatures being uniformly above normal, and much of the snow in the higher levels melted, while at low and moderate elevations the snow generally had all disappeared by the end of the month. The snow remaining in the mountains at the close of the month was well packed and in a favorable condition for slow melting and a gradual run-off later. The heavy rains of February and early March, combined with the abnormally warm weather of the latter month, resulted in unusually high water in all streams, and flood conditions obtained in many sections. As a consequence there was much apprehension among interested people, particularly wholesale firms located in the lower sections of Portland, farmers engaged in cultivating the lowlands along the lower Columbia, fishermen, and logging and lumber companies operating along the lower course of this river or its tributaries, fears being entertained that these earlier floods were indicative of a greater annual rise that probably would equal, if not exceed, the highest stages recorded. These fears were, however, partially allayed by our reports to the effect that much of the snow was already melted, while that remaining in canyons and ravines, and at high elevations, was favorably conditioned for melting slowly, consequently resulting in a gradual run-off.

Table 3 shows the temperature and precipitation conditions that obtained in those sections whose weather most strongly influences the volume of water in the Snake and the upper Columbia rivers, and hence contributes most to the variable stages of the lower Columbia.

TABLE 3.—Temperature and precipitation of the northern Plateau and northern Rocky Mountain region, winter of 1909-10.

Year and month.	Temperature.		Precipitation.	
	Mean.	Departure.	Average.	Departure.
1909.	° F.	° F.	Inches.	Inches.
November.....	40.4	+3.3	2.72	+0.14
December.....	23.3	-6.8	1.24	-0.04
1910.				
January.....	25.3	-1.6	1.36	+0.02
February.....	25.5	-4.6	1.63	+0.61
March.....	46.9	+8.4	0.99	-0.04
Mean.....	32.2	-0.3	1.59	+0.02

TABLE 1.—Climatological data for July, 1910. District No. 12, Columbia Valley.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Sky				Prevailing wind direction.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelting.	Number of rainy days.	Number of clear days.	Number of partly cloudy days.			Number of cloudy days.
Montana.																				
Anaconda.	Deer Lodge.	5,300	9	64.8	+ 1.4	93	14	37	9	41	0.84	.....	0.42	0.0	7	20	7	4	.....	C. D. Demond.
Bison Mountain.	Powell.	7,240	1	.....	.....	.....	.....	.....	.....	.....	0.56	.....	0.23	0.0	9	17	13	1	.....	C. H. Anderson.
Butte.	Silver Bow.	5,716	15	68.4	+ 4.7	92	18	40	9	40	0.50	- 0.78	0.35	0.0	3	21	3	7	w.	J. R. Wharton.
Columbia Falls.	Flathead.	3,100	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. I. M. Kennedy.
Comoc.	Ravalli.	.....	2	69.2	.....	96	11	46	5	49	1.13	.....	0.62	0.0	6	22	7	2	.....	Hiram Platt.
Dayton.	Flathead.	2,800	6	67.0	.....	98	14	40	5	51	0.30	.....	0.30	0.0	1	27	4	0	nw.	Charles Frost.
East Anaconda.	Deer Lodge.	5,500	5	66.6	.....	93	14	40	11	38	0.84	.....	0.35	0.0	7	27	4	0	nw.	C. D. Demond.
Fortine.	Lincoln.	2,975	4	63.0	.....	96	14	30	27	57	0.36	.....	0.18	0.0	3	21	9	1	w.	Mike Peery.
Hamilton.	Ravalli.	3,575	7	69.0	.....	95	17	43	11	40	1.05	.....	0.67	0.0	4	21	9	1	s.	U. S. Weather Bureau.
Hat Creek.	Powell.	6,000	1	.....	.....	.....	.....	.....	.....	.....	1.08	.....	0.44	0.0	7	15	14	2	w.	M. K. Landreth.
Kalispell.	Flathead.	2,965	11	66.6	+ 2.3	95	17	44	5	43	0.43	- 0.41	0.21	0.0	4	19	11	1	w.	U. S. Weather Bureau.
Lost Creek.	Deer Lodge.	5,200	.....	.....	.....	.....	.....	.....	.....	.....	0.50	.....	0.35	0.0	2	21	9	1	sw.	Frank Henault.
McGinnis Meadows.	Lincoln.	.....	.....	64.4	.....	98	14	35	27	57	0.24	.....	0.16	0.0	2	15	11	1	sw.	H. L. Beebe.
Missoula.	Missoula.	3,225	32	71.0	+ 3.7	102	14	42	5	50	0.33	- 0.99	0.09	0.0	4	22	6	3	sw.	U. S. Weather Bureau.
Ophir.	Powell.	8,800	1	.....	.....	.....	.....	.....	.....	.....	1.17	.....	0.61	0.0	6	18	10	3	w.	E. S. Wilton.
Ovando.	do.	4,207	10	58.9	- 1.6	94	14	32	9	53	1.16	+ 0.03	0.40	0.0	5	1	30	0	w.	S. B. Muchmore.
Philipsburg.	Granite.	5,275	7	65.3	.....	98	13	40	4	52	0.62	.....	0.41	0.0	5	23	3	0	sw.	G. T. Bramble.
Plains.	Sanders.	2,475	12	68.4	+ 2.4	95	14	38	9	44	0.35	- 1.16	0.30	0.0	2	27	2	2	sw.	M. H. Pierce.
Pleasant Valley.	Flathead.	3,500	3	59.3	.....	94	14	24	26	65	0.24	.....	0.30	0.0	15	16	0	.....	A. D. Stillman.	
Polson.	do.	2,920	2	71.2	.....	98	17	48	9	41	0.16	.....	0.12	0.0	3	23	2	2	.....	F. P. Brown.
St. Ignatius.	Missoula.	2,700	4	68.6	.....	100	17	41	28	50	0.29	.....	0.08	0.0	6	26	2	2	n.	U. S. Reclamation Service.
St. Regis.	do.	2,650	2	65.3	.....	100	14	32	26	59	0.36	.....	0.23	0.0	2	13	17	1	ne.	R. D. Lee.
Saltese.	do.	3,600	6	.....	.....	.....	.....	.....	.....	.....	0.25	.....	0.25	0.0	1	30	1	0	s.	E. K. Tarbox.
Snowshoe.	Lincoln.	4,500	4	63.0	.....	89	16	40	1	38	0.73	.....	0.65	0.0	2	22	6	3	w.	J. C. Riter.
Troy.	do.	1,830	14	65.2	+ 0.9	100	16	34	5	53	0.45	- 0.90	0.45	0.0	1	28	0	3	sw.	W. E. Milnor.
Upper Lake McDonald.	Flathead.	3,200	2	62.2	.....	96	16	44	5	46	0.54	.....	0.43	0.0	2	14	12	3	s.	F. F. Liebig.
Willow Glen Stock Farm.	Deer Lodge.	.....	1	63.4	.....	89	13	36	8	42	1.09	.....	0.40	0.0	6	13	15	3	nw.	G. E. Luce.
Wyoming.																				
Afton.	Uinta.	6,200	6	63.0	+ 2.4	91	14	31	5	51	1.06	+ 0.22	0.35	0.0	7	28	3	0	s.	A. U. Call.
Alta.	do.	7,000	1	61.2	.....	87	19	26	23	50	0.71	.....	0.38	0.0	7	15	16	0	sw.	Mrs. Lucy Brown.
Bedford.	do.	5,900	10	61.5	+ 1.5	88	14	31	5	50	0.92	+ 0.18	0.40	0.0	7	24	4	3	w.	C. G. Heiner.
Snake River.	Yellowstone Park.	7,000	4	59.5	.....	90	14	29	6	54	1.40	.....	0.70	0.0	4	11	18	2	w.	U. S. Army.
Nevada.																				
San Jacinto.	Elko.	.....	5	66.6	.....	94	18	28	4	51	0.62	.....	0.41	0.0	3	15	13	3	sw.	Moses Jones.
Utah.																				
Standard.	Boxelder.	.....	6	68.8	.....	90	25	45	5	37	1.75	.....	0.80	0.0	6	16	10	5	sw.	T. B. Jones.
Idaho.																				
Albion.	Cassia.	.....	9	70.8	.....	99	13	36	6	56	0.56	.....	0.20	0.0	4	27	2	2	w.	G. A. Axline.
Almo.	do.	.....	3	.....	.....	.....	.....	.....	.....	.....	0.20	.....	0.10	0.0	2	25	6	0	s.	Wm. L. Eames.
American Falls.	Oneida.	4,341	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	O. H. Barber.
Blackfoot.	Bingham.	4,503	15	69.3	+ 0.7	95	18	40	5	54	0.21	- 0.28	0.21	0.0	1	19	12	0	sw.	E. A. Dowd.
Blackfoot Dam.	do.	.....	2	64.0	.....	90	13	35	5	50	1.02	.....	0.53	0.0	3	21	8	2	w.	N. W. Infield.
Bock's Ranch.	Elmore.	3,500	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	William Book.
Bogus Creek.	Boise.	4,200	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. P. Ingraham.
Boise.	Ada.	2,739	25	76.0	+ 3.2	103	13	50	23	40	T.	- 0.18	T.	0.0	0	22	6	3	nw.	U. S. Weather Bureau.
Bonniers Ferry.	Bonner.	1,850	.....	65.4	.....	99	16	39	14	55	0.46	.....	0.28	0.0	4	19	11	1	sw.	W. H. Heideman.
Boulder Mine.	Boise.	4,800	2	.....	.....	.....	.....	.....	.....	.....	0.34	.....	0.19	0.0	4	27	3	1	.....	Patrick Moriarty.
Buhl.	Cassia.	3,800	5	77.4	.....	102	12	48	4	49	0.28	.....	0.20	0.0	2	18	12	1	w.	H. J. Idema.
Burke.	Shoshone.	4,082	4	60.8	.....	93	16	33	23	47	0.25	.....	0.20	0.0	2	18	12	1	sw.	W. Alvin Hall.
Caldwell.	Canyon.	2,372	6	73.8	.....	101	13	45	23	48	T.	.....	T.	0.0	0	21	10	0	w.	Prof. Wm. J. Boone.
Camas.	Fremont.	4,815	2	71.2	.....	99	18	25	24	61	0.93	.....	0.70	0.0	4	10	0	0	sw.	Mrs. Edna Faulkner.
Cambridge.	Washington.	2,651	14	75.7	+ 3.3	103	13	45	6	54	0.15	- 0.18	0.08	0.0	2	22	3	9	s.	Chas. H. Shepherd.
Cedar Creek Dam.	Twin Falls.	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.04	.....	0.02	0.0	2	20	2	9	s.	H. R. Collins.
Chesterfield.	Bannock.	5,424	15	65.2	+ 3.2	97	18	32	6	58	0.44	- 0.03	0.20	0.0	1	17	3	3	sw.	Chas. S. West.
Coeur d'Alene.	Kootenai.	2,157	20	69.8	+ 2.9	96	16	45	1	46	1.11	- 0.53	0.06	0.0	2	28	0	3	.....	Jos. T. Scott.
Cottonwood Creek.	Boise.	4,000	.....	.....	.....	.....	.....	.....	.....	.....	1.20	.....	1.00	0.0	1	21	0	0	.....	Frank Hedrick.
Crawford.	do.	4,300	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. Gertrude Kerby.
Culdesac.	Nex Perce.	1,520	3	71.3	.....	99	15	40	4	52	0.00	.....	.....	0.0	0	26	5	0	.....	R. R. Richmond.
Deary.	Latah.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. M. Call.
Dent.	Nex Perce.	1,350	6	69.7	.....	102	14	40	27	60	0.02	.....	0.01	0.0	2	24	7	0	.....	Emil Schuessler.
Driggs.	Fremont.	6,097	3	63.5	.....	88	14	32	23	46	0.80	.....	0.50	0.0	2	14	10	7	sw.	Walter H. Durrant.
Edie.	do.	.....	2	64.0	.....	88	14	36	6	46	1.77	.....	0.78	0.0	4	26	5	0	s.	Geo. B. Edie.
Edwardsburg.	Idaho.	4,500	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. Edwards.
Emmett.	Canyon.	2,350	4	76.6	.....	104	13	42	23	52	0.12	.....	0.12	0.0	1	22	9	10	nw.	C. P. Kar.
Flowers.	Blaine.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Forest Service.
Forney.	Lemhi.	.....	13	65.0	+ 4.2	96	15	32	23	57	0.70	- 0.39	0.55	0.0	2	12	9	10	sw.	M. B. Merritt.
Garden Valley.	Boise.	3,800	4	.....	.....	.....	.....	.....	.....	.....	0.27	.....	0.20	0.0	2	20	11	0	.....	Mrs. Gertrude M. Ross.
Garnet.	Elmore.	2,575	11	81.1	+ 1.8	110	13	49	5	48	0.00	- 0.13	0.0	0.0	0	23	6	2	e.	Asa A. Kenison.
Glenns Ferry.	do.	2,569	3	79.0	.....	110	13	41	5	59	0.18	.....	0.16	0.0	2	27	2	2	nw.	I. E. Perkins.
Gooding.	Lincoln.	3,572	2	74.2	.....	104	13	40	5	49	0.24	.....	0.10	0.0	4	23	6	2	w.	John Krall, jr.
Grand Forks.	Shoshone.	3,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Henry Kottkey.
Grandview.	Owyhee.	.....	2	79.5	.....	1066														

TABLE 1.—Climatological data for July, 1910. District No. 12—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.					Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelting.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Idaho—Cont'd.																				
Moscow	Latah	2,748	18	67.0	+ 0.4	94	16	40	23	44	T.	- 0.78	T.	0.0	0	20	7	4	w.	University of Idaho.
Mountainhome	Elmore	3,150	5	73.0		162	16	39	5	53	T.		T.	0.0	0	21	7	3	nw	J. E. Ellen Mantion.
Murtaugh	Cassia		4	71.2		97	13	38	5	46	0.71		0.35	0.0	3	21	10	0	w.	J. E. Steinhorn.
Nes Perce	Nes Perce	3,182	2	63.5		96	16	33	27	55	0.08		0.08	0.0	1	21	4	6	nw.	P. Mitchell.
Oakley	Cassia	4,700	18	73.4	+ 2.7	105	27	42	5	45	0.35	- 0.06	0.20	0.0	3	17	13	1	s.	John Adams.
O'Hara Bar	Idaho	1,400																		J. D. Agnew.
Orofino	Nes Perce	1,027	6	71.3		101	19	43	23	52	0.05		0.05	0.0	1	38	2	1		Geo. Altender.
Payette	Canyon	2,159	20	75.5	+ 1.6	107	13	44	23	53	0.02	- 0.31	0.02	0.0	1	23	7	2	n.	E. F. Allen.
Peaceful Valley	do	2,380		78.8		108	13	46	15	53	0.09		0.09	0.0	1	23	6	2	nw.	J. W. Newton.
Pebble	Rannock	5,277	2	65.1		95	27	30	5	58	0.47		0.20	0.0	4	11	18	2	sw.	Mrs. Fannie Say.
Pierson	Custer	6,900																		David P. Clarke.
Pine	Elmore	4,100																		Mrs. Jennie Potter.
Placerville	Boise	4,200																		James McDewitt.
Pleasant Valley	Ada	3,000	3	74.2		104	13	41	23	48	0.10		0.08	0.0	3	27	3	1	nw.	C. E. Friedrich.
Pocatello	Bannock	4,483	11	73.5	+ 2.3	96	19	46	5	40	0.10	- 0.53	0.05	0.0	4	16	14	1	se.	U. S. Weather Bureau.
Pocatello Nursery	do	5,396	3	66.4		92	18	31	23	50	0.28		0.11	0.0	3	15	14	2	sw.	Mrs. Anna M. Wrensted.
Poplar	Bingham																			Stanley Bybee.
Port Hill	Bonner	1,665	22	66.1	+ 0.1	94	16	43	2	44	0.32	- 0.75	0.21	0.0	2	29	0	2	sw.	H. A. French.
Powers Ranch	Boise	4,300																		Mrs. Mary French.
Pyle Creek	do	3,100	2																	Walter L. Cole.
Rattlesnake Creek	Elmore	4,000																		Richard M. Green.
Richfield	Lincoln			73.6		99	13	40	5	48	0.10		0.07	0.0	2	25	5	1	w.	C. H. Fitch.
Roseworth	Twin Falls												0.21	0.0	6	7	21	3	nw.	D. B. Hartwell.
Ruby Creek	Boise	4,400																		O. A. Hatter.
Rupert	Lincoln	4,204	4	72.7		99	13	41	4	53	0.46		0.46	0.0	1	26	2	3	w.	Will Parry.
St. Maries	Kootenai	2,263	14	67.4	+ 1.6	98	16	40	27	50	0.17	- 0.96	0.17	0.0	1	24	5	2	w.	J. S. Turnbull.
Salmon	Lemhi	4,040	5	68.9		100	13	40	6	55	0.62		0.35	0.0	3	25	5	1	sw.	E. K. Abbott.
Salmon River Dam	Twin Falls		3	74.8		99	13	43	5	42	0.60		0.18	0.0	6	15	10	6	nw.	Arch. M. Gilbert.
Sandpoint	Bonner	2,086																		E. H. Edgerton.
Sheep Hill	Boise	5,000	2																	Clifford M. Garner.
Shoshone	Lincoln	3,968	3	72.3		95	13	41	24	51	0.18		0.11	0.0	2	20	11	0	w.	O. A. Truman.
Silver City	Owyhee	6,280	3										0.42	0.0	4	18	11	2	s.	A. D. Bradfield.
Smith Prairie	Elmore	5,200																		Wm. W. Newell.
Smith Ranger Station	Bonner	1,080	2										0.17	0.0	5	20	8	3	sw.	T. D. Crittenden.
Soldier Creek	Blaine			67.0		92	17	36	23	45	0.22		0.20	0.0	3	26	3	2	w.	J. E. Minear.
Springfield	Bingham	4,420	2	71.2		100	13	38	5	53	0.30		0.20	0.0	2	22	7	2	sw.	Mrs. W. A. Edwards.
Sugar	Fremont		4	67.8		93	18	38	23	52	0.39		0.18	0.0	4	20	8	3	sw.	Arthur Cutting.
Sunnyside	Elmore		2	76.5		105	13	45	23	49	0.10		0.10	0.0	1				nw.	E. A. Wilmot.
Tripod Mountain	Boise	4,300	2										T.	0.0	0	19	10	2		Mrs. Verna Paddock.
Twin Falls	Twin Falls	3,825	6	73.4		103	13	38	4	53	0.13		0.10	0.0	3	10	20	1	w.	J. A. Waters.
Vernon	Fremont		13	67.0	+ 2.6	93	13	31	23	51	0.04	- 0.59	0.04	0.0	1	17	13	1	sw.	A. M. Slattery.
Wallace	Shoshone	2,738	3	66.2		99	16	40	27	49	0.27		0.16	0.0	5				sw.	U. S. Weather Bureau.
Wendell	Lincoln	3,400	3	77.1		105	13	42	5	51	0.34		0.15	0.0	4	24	6	1	w.	Chas. L. Dinger.
Washington.																				
Aberdeen	Chehalis	162	19	58.3	- 1.8	89	10	41	14	32	0.29	- 0.62	0.26	0.0	2	0	30	1	w.	Carl S. Weatherwax.
Anacortes	Skagit	60	16	62.5		86	10	40	18	45	0.00	- 0.59	0.00	0.0	0	26	4	1		Douglas Allmond.
Baker	do	200	4	63.8		91	10	42	5	40	0.64		0.36	0.0	2	19	6	6		Robt. M. White.
Bellingham	Whatcom	60	15	61.9	+ 1.1	86	10	40	3	39	0.05	- 0.71	0.05	0.0	1	22	6	3		Sanford B. Mayhew.
Blaine	do	57	13	59.8	- 1.1	86	10	38	4	36	0.00	- 1.85	0.00	0.0	0	21	10	0	sw.	U. S. Weather Bureau.
Blalock Island	Benton																			Blalock Island Garden Co.
Blewett	Chelan	2,200																		John Beermeister.
Bremerton	Kitsap	30											T.	0.0	0					U. S. Navy Yard.
Brewster	Okanogan	1,620		75.0		100	20	52	23	39	0.13		0.13	0.0	1	25	6	0	sw.	Mrs. H. F. Bertram.
Bumping Lake	Yakima			60.8		93	11	30	17	51	0.05		0.05	0.0	1	30	0	1		U. S. Reclamation Service.
Cashmere	Chelan												0.00	0.0	0	29	2	0	nw.	Valley Power Co.
Cedar River	King	535	3										0.07	0.0	1	19	2	10		George Landsburg.
Centralia	Lewis	212	17	62.8	- 1.5	93	10	40	4	49	0.00	- 0.67	0.00	0.0	0	21	10	0	w.	I. S. Turner.
Cheney	Spokane	2,351	11																	Northern Pacific Ry.
Clelum	Kittitas	1,930	11	64.0	+ 0.2	97	19	34	27	59	0.00	- 0.35	0.00	0.0	0	30	1	0	sw.	J. A. Balmer.
Clearbrook	Whatcom	140	7	58.4		93	10	33	4	51	0.02		0.02	0.0	1	15	12	4	w.	Geo. Gibbs.
Clearwater	Jefferson	135	14																	
Colfax	Whitman	2,300	21	66.6	+ 1.8	98	19	36	27	55	0.10	- 0.54	0.10	0.0	1					W. H. James.
Colville	Stevens	1,635	10	67.3	- 0.8	101	16	38	31	55	0.10	- 1.09	0.08	0.0	2	27	2	2	sw.	W. L. Sax.
Conconully	Okanogan	2,300	10	67.6	+ 1.1	93	12	42	18	42	0.02	- 1.08	0.02	0.0	1	25	5	1	s.	Wm. Baines.
Cowiche	Yakima			72.6		97	11	50	1	40	0.00		0.00	0.0	0	31	0	0	nw.	U. S. Reclamation Service.
Crescent	Lincoln	2,250	10																	Otto Wollweber.
Davenport	do	2,450	1	68.2		94	19	36	18	52	0.13		0.06	0.0	3	30	1	0	sw.	W. H. Reed.
Dayton	Columbia	1,700	24	70.5	+ 1.0	94	11	45	1	42	T.	- 0.61	T.	0.0	0	25	6	0	sw.	W. W. Hendron.
Detroit	Mason	30	2	63.8		95	10	43	4	47	0.00		0.00	0.0	0	22	8	1	s.	Walter O. Eckert.
Dixie	Walla Walla	5,000	1										0.23	0.0	3	21	6	4	sw.	T. Z. Andrews.
Duckabush	Jefferson	380	2	61.6		93	11	40	4	45	0.31		0.31	0.0	1	16	11	4	n.	E. J. Finch.
East Sound	San Juan	500	15																	Benj. E. Harrison.
Ellensburg	Kittitas	1,571	22	68.6	+ 2.2	98	19	39	27	57	0.00	- 0.28	0.00	0.0	0	30	1	0	nw.	R. Lee Barnes.
Ephrata	Grant	1,265	7	75.5		100 <sup>b</sup>	12	52 <sup>b</sup>	23	38 <sup>b</sup>	0.00		0.00	0.0	0	27	4	0		T. J. Cook.
Forks	Clallam	480	1	80.7		98 <sup>b</sup>	10	40 <sup>b</sup>	2	50 <sup>b</sup>	0.38		0.30	0.0	3	15 <sup>a</sup>	13 <sup>a</sup>	2 <sup>a</sup>	sw.	E. A. Markham.
Fort Simcoe	Yakima	1,427	16	70.4	- 2.6	102	14	39	1	55	0.00	- 0.09	0.00	0.0	0	26	4	1		Frank C. Hill.
Goat Lake	Snohomish	2,900	1										0.74	0.0	2					C. M. Mackintosh.
Gold Creek	Yakima	2,600	1										0.00	0.0	0	24	4	3	w.	John W. Anderson.
Gold Hill	do																			
Goldendale	Klickitat	1,600	4	69.7		100	19	41	4	51				0.0		22	6	3	w.	Klickitat Co. Abstract Co.
Granite Falls	Snohomish	397	7										0.90	0.0	2	20	5	6	nw.	J. H. Cleaver.
Guler	Klickitat	2,200																		Frank Kuehnel.
Hatton	Adams	1,100	5	72.0		103	11	39	1	55	0.07		0.05	0.0	2	21	6	4	sw.	Dr. A. V. Marion.
Huntsville	Columbia	1,400	2										0.02	0.0	1	31	0	0		Dr. B. Hill.
Irene Mountain	Okanogan	3,015	1										0.09	0.0	3	21	9	1	sw.	Mrs. Manda Shain.
Kachess Valley	Kittitas	3,000																		
Kennewick	Benton	367	15	75.0	- 2.6	103	11	45	4	46	T.	- 0.13	T.	0.0	0					Mrs. I. W. Soth.
Kettle Falls	Stevens	1,265	1	70.6		100	12	43	5	48	0.09		0.05	0.0	2	27	4	0		Harry H. Cole.
Kiona	Benton	430	5																	

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.					Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelting.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Washington—Cont'd.																				
Laurier	Ferry	1,614	6	71.0		102	12†	42	27	54	0.30		0.14	0.0	3	13	10	8	sw.	Mrs. J. S. Myers.
Lester	King	14	1	61.8		94	10	36	27	51	0.10		0.10	0.0	1	27	2	3	w.	W. W. Clabaugh.
Lone Tree	Chehalis	14	1	58.1		77	10	49	20	21	0.06		0.04	0.0	3	7	19	5	nw.	U. S. A. Engineer Corps.
Longmire Springs	Pierce	2,800	1								T.		T.	0.0	0	28	3	0	sw.	U. S. Forest Service.
Lost Creek	Okanogan	3,125	1								T.		T.	0.0	0	28	3	0	sw.	P. H. Leese.
Lucerne	Chelan	1,100	3	65.6		94	18†	40	1†	46	0.00		0.0	0.0	0	12	16	2	nw.	Mrs. Barbara Shearer.
Lytle	Klickitat	600	17											0.0	0	26	3	2	sw.	Wm. Morginson.
McCumber's Ranch	Yakima	2,182	1								0.00		0.0	0.0	0	26	3	2	sw.	Mrs. Mary McCumber.
Merritt	Chelan	2,175	3											0.0	0	26	3	2	sw.	H. B. Smith.
Mottinger	Benton	307	10	77.0	+ 1.1	102	11†	52	1†	44	0.00	- 0.19	0.00	0.0	0	30	1	0	w.	G. H. Mottinger.
Mount Pleasant	Skamania	650	10	64.7	- 0.6	96	10	41	2	41	0.00	- 1.14	0.00	0.0	0	28	2	0	w.	F. M. Groat.
Moxee	Yakima	1,000	18	73.2	+ 1.9	104	11	44	14†	55	T.	- 0.26	T.	0.0	0	25	5	1	w.	Henry B. Scudder.
Newport	Stevens	2,400	1	62.6		95	16	35	18†	57	0.57		0.16	0.0	4	25	6	0	sw.	Chas. M. Talmadge.
Nighthawk	Okanogan	3,050	1								0.01		0.01	0.0	1	29	2	0	nw.	Steve Nagy.
North Head	Pacific	211	8	55.2	- 2.5	67	10	46	20	11	0.13	- 0.41	0.07	0.0	3	5	16	10	nw.	U. S. Weather Bureau.
Northport	Stevens	1,350	11								0.00		0.00	0.0	0	28	2	1	nw.	Forrest B. Phillips.
North Yakima	Yakima	1,070	1	74.4		100	11	47	23	48	0.00		0.00	0.0	0	28	2	1	nw.	U. S. Weather Bureau.
Nutland	Klickitat	73.1	1	76.1		101	11	51	1	41	0.00		0.00	0.0	0	27	4	0	sw.	J. R. Shepard.
Odessa	Pacific	1,540	7								T.		T.	0.0	0	27	4	0	sw.	Wm. U. Neely.
Olga	San Juan	50	20	58.2	- 1.2	77	10	44	3†	28	T.	- 0.73	T.	0.0	0	21	10	0	sw.	Cecil S. Willis.
Olympia	Thurston	200	32	62.3	- 0.8	91	10†	39	4†	49	0.00	- 0.69	0.00	0.0	0	25	1	5	nw.	M. O'Connor.
Omak	Okanogan	850	1	76.2		105	20	47	3†	51	T.		T.	0.0	0				n.	Wm. C. Tait.
Oroville	do	922	1											0.0	0				n.	A. M. Dufield.
Peola	Garfield	5,000	1								0.21		0.07	0.0	5	25	6	0	nw.	Samuel Gruell, sr.
Pomeroy	do	1,500	18	70.6	- 1.9	98	21	44	1†	47	0.25	- 0.18	0.25	0.0	1	22	8	1	w.	Peter McClung.
Port Crescent	Clallam	259	15	54.4	- 1.0	90	10	28	18	40	T.	- 0.61	T.	0.0	0	13	17	1	nw.	U. S



TABLE 1.—Climatological data for July, 1910. District No. 12—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.			
Oregon—Cont'd.																					
Forest Grove.	Washington.	220	20	60.7																	Pacific University.
Gardiner.	Douglas.	72	20	60.7	+ 0.4	78	10	46	18†	27	0.00	- 0.90	0.00	0.0	0	19	10	2			Hon. J. S. Gray.
Glendale.	do.	1,441	5	71.6		101	19	37	4	53	0.00		0.00	0.0	0	27	4	0	nw.		B. J. Simpson.
Glenora.	Tillamook.	575	18	62.4	- 0.3	98	19	37	26	57	0.01	- 1.22	0.01	0.0	1	24	3	4	nw.		Mrs. Jennie Reeher.
Gold Beach.	Curry.	40	8	56.0		77	7	39	31	32	0.00		0.00	0.0	0	30	0	1	nw.		C. Dewey.
Granite.	Grant.	4,680	4	59.6		96	13	28	27	53	0.56		0.34	0.0	3	14	12	5	nw.		L. M. Ford.
Grants Pass.	Josephine.	956	21	71.2	+ 1.6	105	19†	42	22	55	0.00	- 0.11	0.00	0.0	0	26	5	0	sw.		John B. Paddock.
Grass Valley.	Sherman.	2,381	8	65.0		95	11†	37	1	42	0.00		0.00	0.0	0	23	6	2	sw.		Oreg. Ry. & Navigation Co.
Grindstone.	Crook.	5,000		64.0		93	13	30	2	47	1.20		1.20	0.0	1	15	3	13	sw.		Orrin C. Mills.
Headworks.	Clackamas.	719	4	65.4		100	10	41	27	48	0.00	- 1.58	0.00	0.0	0	26	5	0	sw.		Portland Water Works.
Heppner.	Morrow.	1,950	21	69.0	+ 0.2	97	11	44	1	42	0.02	- 0.55	0.01	0.0	2	26	4	1	nw.		Ralph Kenton.
Hermiston.	Umatilla.	450	3	75.2		103	11	48	18	49	0.01		0.01	0.0	1	29	1	1			C. W. Kellogg.
Hood River.	Hood River.	300	19	68.6	+ 1.3	101	10†	40	17†	44	0.00	- 0.19	0.00	0.0	0	28	0	3	w.		H. L. Hasbrouck.
Huntington.	Baker.	2,165	9																		J. M. Day.
Jacksonville.	Jackson.	1,640	21	73.8	+ 3.9	102	19	46	22	48	0.22	+ 0.03	0.22	0.0	1	27	2	2	w.		E. Britt.
Joseph.	Wallowa.	4,400	21	64.0	+ 1.7	88	15	37	22	48	0.72	- 0.20	0.49	0.0	3	28	2	1	s.		F. F. McCully.
Klamath Agency.	Klamath.	4,169	2	59.8		90	12†	24	4	58	0.01		0.01	0.0	1	21	3	7	s.		Edson C. Watson.
Klamath Falls.	do.	4,250	15	68.6	+ 0.9	94	13	37	4	37	0.26	+ 0.14	0.26	0.0	1	24	3	4	nw.		W. H. Heileman.
Le Grande.	Union.	12,784	24	70.2	+ 1.5	99	16	41	23	49	1.16	+ 0.52	1.07	0.0	3	26	3	2	nw.		W. A. Worstell.
Lakeview.	Lake.	4,800	7	63.2	- 3.3	101	30	20	4	70	0.00	- 0.28	0.00	0.0	0	27	2	2	s.		Geo. L. Horton, jr.
Madras.	Crook.	2,150	1					34	24†		0.05		0.05	0.0	1	28	3	0	n.		Howard W. Turner.
Marshfield.	Coos.	12	6	57.8		73	10	43	3	21				0.0	0	10	15	6	nw.		U. S. Weather Bureau.
McKenzie Bridge.	Lane.	1,400	7	64.6		98	8†	36	20	59	0.00		0.00	0.0	0	27	0	4	w.		Geo. Frissell.
Merrill.	Klamath.	4,070	4	67.4		95	13	37	5	45	0.81		0.00	0.0	2	25	6	0			Mrs. Agnus Ritchson.
McMinnville.	Yamhill.	180	22	65.8	+ 1.1	100	10	41	18	51	T.	- 0.38	T.	0.0	0	22	6	3	sw.		J. H. Pruett.
Mikkalo.	Gilliam.	1,600	4	70.8		99	11†	43	17	44	0.02		0.02	0.0	1	28	1	2	w.		Frank Little.
Miramonte Farm.	Clackamas.	195	21	66.3	+ 1.1	100	10	43	18	46	0.02	- 0.52	0.02	0.0	1	26	5	0	n.		G. M. Muecke.
Monroe.	Benton.	350	13	65.8	+ 0.5	97	10	41	26	41	0.00	- 0.32	0.00	0.0	0	28	1	2	nw.		J. A. Peek.
Mount Angel.	Marion.	485	24	67.2		96	11	48	47	37	0.00	- 0.62	0.00	0.0	0	28	1	2	c.		Dr. U. F. Fisher.
Mountain Park.	do.	1,440	4	66.7		93	19	40	18†	43	0.00		0.00	0.0	0	27	1	3	w.		M. Markley.
Musick.	Douglas.	5,000		61.6		86	19†	35	1†	38	0.00		0.00	0.0	0	27	3	1	sw.		Alex. Lundburg.
Newport.	Linton.	69	22	56.2	- 1.5	69	6	42	27	22	0.00	- 0.86	0.00	0.0	0	27	1	3	nw.		William Matthews.
Paisley.	Lake.	4,500	6	69.6		95	13	42	4	41	0.30		0.20	0.0	2	25	3	3	sw.		E. C. Woodward.
Pendleton.	Umatilla.	1,070	20	70.8	- 0.8	104	11	42	30	56	0.01	- 0.43	0.01	0.0	1	22	8	1	sw.		E. F. Averill.
Pilot Rock.	do.	1,817	1	73.7		103	12	46	1	46	0.00		0.00	0.0	0	23	7	1	nw.		John P. McManus.
Pompeii.	Clackamas.	3,879	15	57.4	+ 1.6	86	10†	37	18	45	0.00	- 1.86	0.00	0.0	0	25	5	1	sw.		O. C. Yocum.
Portland.	Multnomah.	57	38	67.1	+ 0.3	97	10	51	4	31	T.	- 0.59	T.	0.0	0	18	12	1	nw.		U. S. Weather Bureau.
"P" Ranch.	Harney.	4,300		67.4		95	12	38	23	52	0.12		0.12	0.0	1	20	11	0			J. P. Jefferson.
Princeville.	Crook.	2,864	13	66.7	+ 1.0	98	19	36	2†	58	0.14	- 0.21	0.09	0.0	2	28	1	2			Geo. Whiteis.
Prospect.	Jackson.	12,750	4	67.3		99	19	36	22	54	0.11		0.11	0.0	1	23	7	1	w.		E. F. Graham.
Ramsey.	Wasco.	1,350		64.6		93	11	37	27	46	0.06		0.06	0.0	1	28	1	2	e.		Mrs. Iva B. Collins.
Range.	Grant.	3,500	1	60.0		96	20	22	4	62	T.		T.	0.0	0	29	2	0			Craig Thom.
Richland.	Baker.	2,350	8	72.1		100	13	43	23	47	T.		T.	0.0	0	24	6	1	w.		C. G. Morgan.
Riverside.	Malheur.	3,000	11	76.2	+ 6.7	105	13	44	2†	51	0.31	+ 0.02	0.18	0.0	3	17	14	0	w.		Mrs. Leah Fairman.
Roseburg.	Douglas.	523	33	68.5	+ 1.9	98	10	45	5	43	0.03	- 0.30	0.03	0.0	1	26	4	1	nw.		U. S. Weather Bureau.
Salem.	Marion.	120	20	67.2	+ 0.8	95	10	50	3†	33	0.00	- 0.48	0.00	0.0	0	27	0	4	nw.		M. P. Baldwin.
Siskiyou.	Jackson.	4,115	1	66.5		94	19	40	1†	41	0.00		0.00	0.0	0	21	8	2	n.		U. S. Weather Bureau.
Sparta.	Baker.	4,150	17																		Hon. J. A. Wright.
Stafford.	Clackamas.	400	13	66.5	+ 0.2	101	10	44	14†	44	T.	- 0.85	T.	0.0	0				ne.		John P. Gage.
The Dalles.	Wasco.	112	35	72.6	+ 0.0	99	10†	49	27	44	T.	- 0.18	T.	0.0	0	28	1	2	w.		S. L. Brooks.
Toledo.	Linton.	75	20	63.4	+ 2.3	80	10†	45	2	34	0.00	- 0.50	0.00	0.0	0	31	0	0	nw.		C. B. Crosson.
Umatilla.	Umatilla.	340	14	77.4	+ 2.0	103	11	54	1†	45	0.06	- 0.12	0.05	0.0	2	27	2	2	w.		Mrs. Helen T. Duncan.
Vale.	Malheur.	2,242	18	73.1	+ 2.7	109	20	23	23	66†	T.	- 0.28	T.	0.0	0	25	2	4	ne.		H. P. Osborn.
Van.	Harney.	3,506	4	67.6		103†	13	36†	5	56†	0.60		0.60	0.0	1	19†	8†	0†	nw.		Geo. Howe.
Wallace Orchard.	Polk.	170	1	69.2		98	10	42	3	43	T.		T.	0.0	0	19	12	0			Chas. A. Parks.
Wallowa.	Wallowa.	2,935	7	65.6		96	16	34	23†	55	0.24		0.11	0.0	4	16	10	5	nw.		L. J. Coverstone.
Wasco.	Wasco.	1,263	2	72.6		99	11	50	29	37	T.		T.	0.0	0	29	1	1	w.		A. J. Swift.
Warm Springs.	Crook.	1,200	8	70.4		100	11	40	3†	50	0.00		0.00	0.0	0	30	0	1	nw.		C. C. Covey.
Weston.	Umatilla.	1,800	20																		M. A. Baker.
Williams.	Josephine.	1,368	17																		J. M. John.
Yonka.	Klamath.		3	65.5		95	10†	32	4†	54	0.30		0.22	0.0	3	24	7	0	s.		Jacob Rueck.

\* Precipitation included in that of the next measurement.

\*\* Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.

† Also on other dates.

‡ Separate dates of falls not recorded.

§ Data are from standard instruments not supplied by the U. S. Weather Bureau.

|| Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

|| Estimated by observer.

|| Precipitation for the 24 hours ending on the morning when it is measured.

T. Precipitation is less than 0.01 inch rain or melted snow.

a, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.

TABLE 2.—Daily precipitation for July, 1910. District No. 12, Columbia Valley.

Stations.	River basins.	Day of month.																															Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Montana.																																	
Anaconda.	Missoula.	.08	T.	T.	.42				.03				.05		T.	.03	T.	T.	T.		T.	T.	.03							.20	T.	0.84	
Bison Mountain.	do.	.02	.03		.23				.09						.06		T.		T.	.01		.03	.01							.08	T.	0.56	
Butte.	do.				.35														T.			.10								.05	T.	0.50	
Columbia Falls.	Flathead.																																1.13
Como.	Bitter Root.	.03	.03	.40	.63										.03							.01											0.30
Dayton.	Flathead.									.30				T.	T.																		0.84
East Anaconda	Missoula.	.02	T.		.35				.03				.14	T.	T.			T.	T.	T.		.03	T.	.01						.26	T.	0.36	
Fortine.	Flathead.			T.	T.					T.					.18	T.								.14	.04								1.05
Hamilton.	Bitter Root.	.19	.06		.67																										.13		1.05
Hat Creek.	Missoula.	.44	.05		.24				*	.07												.03	.06								T.	.19	1.08
Kalispell.	Flathead.			.10					.08						.04	T.		T.						.21							T.		0.43
Lost Creek.	Missoula.				.35				.15			T.						T.													T.		0.50
McGinnis Meadows.	Kootenai.								T.						.08								.16								T.		0.24
Missoula.	Missoula.		.01	.01	.02				T.	T.					T.							T.	.09								T.	T.	0.13
Ophir.	do.	.37	.03		.61				.11						T.							T.	.03										1.17
Ovando.	do.	T.	.40	T.	.37				T.						.15																		1.16
Phillipsburg.	do.	.41	.04						T.	T.										T.		.02		.08							.16	.06	0.62
Plains.	Columbia.				.30	.05			T.																								0.35
Pleasant Valley.	Kootenai.											T.			.04								T.	.20									0.24
Polson.	Flathead.				.12				.04																								0.16
St. Ignatius.	do.		.05	.08	.05				.03						.01	T.						T.	.07										0.29
St. Regis.	Missoula.				.23				.13							T.																	0.36
Saltese.	do.																						.25										0.25
Snowshoe.	Kootenai.		T.	T.	T.				T.						.08								.65										0.73
Troy.	do.																						.45										0.45
Upper Lake McDonald.	Flathead.				.11							T.											.43	T.									1.09
Willow Glen Stock F'm.	Missoula.		T.		.40				.05				.05			T.				.35		.10	.01								.13	T.	
Wyoming.																																	
Afton.	Snake.		.02																.05	.09	.35	.21		.22							.12	1.06	
Alta.	do.			.01	.11										.05				.38	.10		.04	.10									T.	0.71
Bodford.	do.			T.								.06			.40				.21	.04	.10	T.								.02	.02	T.	0.92
Snake River.	do.				.30								T.		.20				T.	.30		.70	T.	T.							T.	T.	1.40
Nevada.																																	
San Jacinto.	Snake.											T.	.41		.17	T.		T.	T.	T.								.04	T.	T.	T.	T.	0.62
Utah.																																	
Standrod.	Raft.														.01				.44		.39	.80	.03							T.	.08		1.75
Idaho.																																	
Albion.	Upper Snake.				.20																	.14	.15									.07	0.56
Almo.	do.														.10				.10														0.20
American Falls.	do.																																
Blackfoot   .	do.			T.											.21			T.		T.		T.									T.	T.	0.21
Blackfoot Dam.	do.			T.								T.			.05			.39	T.	T.		T.									T.	.58	1.02
Bock's Ranch.	Boise.																																
Bogus Creek.	Payette.																																
Boise.	Boise.			T.	T.										T.	T.		T.	T.	T.		T.										T.	
Bonniers Ferry.	Upper Columbia.	.10	.05																						.28								
Boulder Mine.	Boise.				.19							.09			T.	.03							.05	.01									
Buhl.	Upper Snake.			.08											.20																		
Burke.	Upper Columbia.				T.	.05						T.											T.	.20									
Caldwell.	Boise.				T.										T.					T.													
Camas.	Lost River Region.															.03					.70		.08	.12								T.	
Cambridge.	Middle Snake.				T.										.02							.08	.07										
Cedar Creek Dam.	Upper Snake.				.02																												
Chesterfield.	do.											.17			.06			T.														T.	.20
Coeur d'Alene.	Upper Columbia.																						.08	.65				.01					
Cottonwood Creek.	Boise.				1.00										T.								.20					T.					
Crawford.	Payette.																																
Culdesac.	Clearwater.																																
Deary.	do.																																0.00
Deary.	do.																																
Driggs.	Upper Snake.				.30										T.								.01	.01									
Edie.	Lost River Region.																				.50	.19	.60								T.	.20	
Edwardsburg.	Salmon.														T.						.78												
Emmett.	Payette.																					T.	.12										0.12
Flowers.	Wood-Mallad.																																
Forney.	Salmon.				.55																												0.70
Garden Valley.	Payette.				.20										T.								.15	.07									0.27
Garnet.	Middle Snake.																																0.00
Glenns Ferry.	do.				.02																			.16									0.18
Gooding.	Wood-Malad.														.03	.04							.07										0.24
Grand Forks.	Upper Columbia.				.10																												
Grandview.	Middle Snake.				T.																												
Grimes Pass.	Boise.				.51																												
Guffey.	Middle Snake.				.47																												
Halley.	Wood-Malad.				.05										.06	T.																	
Hotspring.	Middle Snake.				T.										T.								.05	.10									
Idaho City.	Boise.																																
Idaho Falls.	Upper Snake.												T.			.05								.04									
Indian Valley   .	Middle Snake.																																
Irwin.	Upper Snake.																																



Stations.	River basins.	Day of month.																															Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
<i>Idaho—Cont'd.</i>																																	
Payette	Payette	T.												T.	T.					.02	T.									T.		.02	
Peaceful Valley	Middle Snake																			.09	T.											.09	
Pebble	Upper Snake			T.								T.	T.	.06				.18		.03	T.									T.	.20	.09	
Pierson	Salmon																															.47	
Pine	Boise																																
Placerville	do																																
Pleasant Valley	do				.01	.01																										.10	
Pocatello	Upper Snake	T.		T.	T.							.01		.05					T.		.08						T.		T.		.02	.10	
Pocatello Nursery	do													.07				.11			.10											.28	
Poplar	do																																
Porthill	Upper Columbia			.21																	.11											.32	
Powers Ranch	Boise																																
Pyle Creek	Payette				.25																	.02										.28	
Rattlesnake Creek	Boise																																
Richfield	Wood-Malad													T.	.07			T.	.03		T.							T.				.10	
Roseworth	Upper Snake				.21								T.	.09	.09				.02	.02	.10											.53	
Ruby Creek	Boise																																
Rupert	Upper Snake														.46						T.	T.						T.		T.	T.	.46	
St. Maries	Upper Columbia			.17																												.17	
Salmon River Dam	Salmon	T.			.35	T.						T.			.03			.04	T.		.23	T.							T.			.62	
Sandpoint	Upper Snake	T.			.13										.08	.18				.02	.15									T.		.60	
Sheep Hill	Upper Columbia																																
Shoshone	Boise																																
Silver City	Wood-Malad				.11									T.	T.			T.	.07		T.	.42	.09					T.				.18	



[illegible]

[illegible]

TABLE 3.—Maximum and minimum temperatures at selected stations, July, 1910. District No. 12, Columbia Valley.

Date.	Montana.				Afton, Wyo.		Idaho.																							
	Kalispell.		Missoula.				Boise.	Bonner's Ferry.		Hotspring.		Lewiston.		Mackay.		Meadows.		Pocatello.		Salmon.		Shoshone.		Vernon.		Wallace.				
	Max.	Min.	Max.	Min.				Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	
1...	75	47	81	52	85	34	84	52	75	41	87	56	83	52	81	49	82	43	87	53	81	51	82	57	84	48	77	41		
2...	82	48	89	48	86	37	87	56	64	42	93	52	83	60	80	48	86	39	90	56	89	43	87	51	89	47	80	44		
3...	79	49	86	50	86	38	82	54	75	43	90	50	80	62	81	49	84	50	90	60	92	43	85	52	88	46	78	45		
4...	71	51	66	51	75	45	75	61	78	45	80	58	83	58	79	40	67	52	78	56	84	52	78	53	82	44	77	47		
5...	80	44	81	42	70	31	84	54	73	41	87	48	87	57	87	41	80	38	77	46	77	45	76	42	75	40	80	42		
6...	82	44	86	46	80	33	91	59	78	44	98	54	91	58	82	45	87	38	86	48	89	40	86	50	82	38	82	44		
7...	78	55	83	50	81	35	89	58	78	40	96	57	91	59	88	51	89	41	88	51	90	47	88	49	86	40	81	49		
8...	74	53	76	49	83	37	87	58	80	47	94	55	89	65	89	55	82	43	86	55	87	48	86	54	85	40	80	46		
9...	79	49	84	52	82	35	87	56	85	44	90	58	93	59	84	51	88	43	82	55	83	47	83	57	81	56	84	47		
10...	80	49	89	49	82	34	91	60	86	44	97	57	96	58	88	50	89	43	88	50	84	48	88	52	86	43	88	46		
11...	82	48	88	57	85	40	93	61	88	52	100	58	99	62	88	52	90	42	87	53	87	51	88	55	85	55	90	54		
12...	86	52	92	52	85	39	96	61	91	50	100	59	100	66	83	50	90	45	89	60	90	58	90	57	87	49	92	49		
13...	93	50	99	50	88	43	103	63	90	48	106	63	99	62	93	45	98	46	94	55	100	45	95	59	93	47	91	49		
14...	94	52	102	52	91	44	92	63	94	39	91	64	99	61	87	51	93	48	91	63	96	44	87	62	89	53	97	48		
15...	84	61	93	61	79	54	93	64	90	53	95	61	100	62	81	53	98	45	87	61	90	57	85	57	83	57	92	57		
16...	93	54	100	53	86	45	97	68	99	50	103	71	103	66	89	52	94	46	94	58	96	52	90	61	86	54	99	52		
17...	95	59	101	60	90	50	99	70	93	62	104	73	99	65	94	51	96	54	90	67	94	57	90	66	90	50	87	54		
18...	86	50	84	54	90	52	91	66	90	42	97	67	95	57	94	56	78	53	95	66	92	55	91	65	89	62	89	42		
19...	88	51	98	52	90	51	98	69	93	42	102	72	101	67	93	63	94	47	96	63	92	52	93	59	89	57	94	45		
20...	89	50	85	57	88	48	95	72	88	45	102	74	84	65	92	62	90	61	89	65	85	58	88	67	86	54	90	44		
21...	87	62	93	61	84	50	95	66	94	49	97	69	99	62	85	56	92	50	91	63	90	54	90	64	86	54	93	57		
22...	86	63	92	57	86	44	79	60	87	50	96	70	77	62	82	50	77	50	85	66	85	44	86	63	82	33	65	52		
23...	78	51	83	50	78	34	87	50	65	47	90	67	88	52	90	46	86	34	84	61	84	40	84	52	82	31	70	41		
24...	83	45	93	46	86	36	94	58	83	48	100	70	90	58	92	51	93	40	94	55	94	40	92	41	84	38	82	46		
25...	84	45	93	44	89	43	95	61	86	40	99	71	92	55	86	55	95	43	96	56	96	48	93	52	86	45	87	47		
26...	84	45	90	45	82	46	88	60	93	44	96	68	88	53	90	54	82	43	85	64	95	45	90	57	88	46	82	47		
27...	78	46	88	44	82	41	92	56	85	39	96	67	94	53	81	52	94	39	88	62	91	42	88	65	86	48	84	40		
28...	82	50	94	45	83	51	96	66	90	41	100	72	97	55	83	52	96	40	86	65	94	42	91	61	90	50	88	42		
29...	85	52	93	47	87	47	94	60	92	49	99	73	95	56	90	55	91	46	91	61	91	49	92	60	89	57	88	45		
30...	87	48	91	49	84	43	97	63	93	43	101	74	96	56	91	53	96	43	94	63	93	44	93	60	90	54	90	52		
31...	86	47	97	48	81	41	94	63	90	42	94	75	93	56	90	52	96	45	84	64	94	45	84	64	88	51	86	43		
Mns	82.9	50.3	89.7	52.3	84.0	42.0	91.1	60.9	85.4	45.3	96.1	58.1	92.1	59.1	86.9	51.3	89.0	44.8	88.5	58.7	89.8	48.0	87.7	56.9	86.0	48.0	85.5	47.0		

Washington.																												
Date.	Aberdeen.		Blaine.		Colville.		Kosmos.		Lakeside.		North Head.		North Yakima.		Odesa.		Port Crescent.		Seattle.		Simpson.		Spokane.		Tacoma.		Tatoosh Island.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	66	47	67	50	84	42	65	54	79	53	58	52	81	50	80	49	59	46	64	50	80	48	76	53	65	48	59	48
2...	82	47	89	47	82	43	63	53	83	55	58	52	82	53	82	50	60	45	65	54	79	48	75	55	70	52	58	51
3...	61	43	68	46	81	47	71	49	82	57	57	53	84	56	86	55	57	43	67	52	80	54	79	57	70	51	57	49
4...	67	48	63	38	87	42	73	42	86	58	60	53	87	54	88	50	58	42	71	50	85	55	82	57	72	48	57	50
5...	70	56	72	52	84	40	74	46	86	58	62	54	86	58	85	52	63	51	71	55	86	54	79	56	73	54	58	50
6...	68	51	74	49	87	40	81	42	85	60	58	54	92	55	89	49	60	49	74	56	92	57	84	55	77	52	57	51
7...	68	47	72	54	88	54	79	43	84	66	60	53	92	62	90	48	63	50	74	53	94	61	84	64	75	52	57	51
8...	72	48	73	51	87	51	83	51	86	62	58	54	91	67	89	50	60	48	74	58	91	65	82	60	73	59	54	51
9...	88	59	81	48	80	42	92	46	91	56	60	52	94	63	92	59	79	44	79	58	95	71	87	54	77	55	68	49
10...	89	57	86	50	94	44	97	51	97	60	67	56	98	64	95	59	90	50	86	58	99	67	89	56	87	57	72	53
11...	69	56	76	51	97	44	91	40	99	60	56	55	100	70	98	64	56	50	86	59	102	69	91	61	91	59	59	52
12...	63	52	72	51	98	49	81	40	95	64	56	54	98	63	98	66	58	49	72	54	101	69	94	64	75	54	54	50
13...	65	43	71	51	93	43	78	44	92	62	56	53	94	61	95	59	57	45	66	53	95	62	90	64	66	50	57	51
14...	72	41	72	42	94	42	83	44	88	56	54	50	90	56	95	60	58	38	75	51	90	59	92	60	76	52	57	48
15...	65	50	72	48	92	63	78	53	95	64	58	53	94	60	95	57	60	49	72	55	97	64	92	65	75	54	59	50
16...	65	45	72	42	101	48	79	44	97	62	57	54	95	61	96	59	48	71	52	97	65	95	62	75	48			

TABLE 3.—Maximum and minimum temperatures at selected stations for July, 1910. District No. 12—Continued.

Date.	Walla Walla, Wash.		Oregon.																					
			Ashland.		Baker City.		Eugene.		Gold Beach.		Hermiston.		Marshfield.		Portland.		Prineville.		Roseburg.		The Dalles.		Vale.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1.....	80	54	76	49	.....	.....	70	52	62	48	82	50	64	51	67	56	73	45	66	53	77	51	91	43
2.....	78	58	74	51	.....	.....	69	50	61	48	82	55	62	50	68	55	70	45	64	52	74	52	92	41
3.....	78	57	74	51	.....	.....	73	46	61	45	80	55	64	43	73	54	75	50	74	50	77	59	91	51
4.....	82	57	71	49	.....	.....	77	50	70	51	85	52	68	53	74	51	94	36	77	53	80	56	88	50
5.....	86	59	86	49	.....	.....	79	46	65	43	87	55	67	45	78	52	75	40	86	45	84	54	89	47
6.....	90	62	91	57	.....	.....	83	51	66	44	94	55	67	56	81	59	90	45	90	51	89	56	98	46
7.....	90	63	93	59	.....	.....	87	51	77	45	95	57	66	53	81	55	89	42	88	53	92	59	98	47
8.....	88	62	93	59	.....	.....	88	58	72	58	96	60	65	49	82	61	88	47	91	62	92	66	102	51
9.....	92	61	99	62	.....	.....	90	56	66	53	96	55	67	51	90	62	92	46	93	60	95	64	97	45
10.....	97	64	97	65	.....	.....	95	60	65	44	101	54	73	54	97	67	95	48	98	60	99	59	98	52
11.....	100	68	93	64	.....	.....	93	59	67	51	103	60	67	55	90	63	95	48	90	58	99	64	101	48
12.....	98	70	92	62	.....	.....	86	49	66	52	101	65	63	54	80	57	94	51	88	54	95	65	101	51
13.....	96	66	93	60	.....	.....	81	53	66	44	98	61	64	53	76	55	95	50	87	50	90	60	108	48
14.....	92	65	90	60	.....	.....	84	53	59	45	94	59	61	50	82	53	90	46	87	53	90	54	105	45
15.....	96	64	87	57	.....	.....	75	55	63	51	98	60	64	53	71	55	95	46	77	55	86	61	106	41
16.....	96	66	88	54	.....	.....	72	47	67	44	99	56	61	45	77	55	88	46	74	48	87	60	104	43
17.....	88	63	83	54	.....	.....	70	51	63	43	98	64	67	54	69	54	91	38	76	52	83	61	104	41
18.....	92	55	95	52	.....	.....	82	44	69	43	92	48	67	47	84	53	94	36	98	47	90	50	101	46
19.....	100	65	99	63	.....	.....	91	51	68	45	101	52	68	50	91	60	98	46	96	55	98	54	98	52
20.....	92	67	91	74	.....	.....	90	60	70	47	100	60	65	48	80	67	91	56	98	66	97	64	109	61
21.....	97	64	86	53	.....	.....	90	54	64	51	94	59	65	53	76	57	89	57	77	53	84	62	99	49
22.....	76	58	83	52	.....	.....	84	50	64	45	86	58	66	52	75	56	80	38	82	55	75	58	98	52
23.....	87	54	91	52	.....	.....	82	48	66	43	91	50	66	46	79	55	91	44	88	49	87	52	90	33
24.....	88	63	93	59	.....	.....	82	51	68	46	92	59	66	52	76	58	91	49	89	52	86	58	103	37
25.....	90	62	91	58	.....	.....	91	53	67	45	94	54	63	48	77	54	91	47	88	53	86	56	102	51
26.....	88	62	89	57	.....	.....	79	45	64	43	91	63	63	51	71	52	.....	.....	85	49	85	62	102	51
27.....	92	60	91	56	.....	.....	83	48	63	40	93	49	63	46	82	53	91	37	88	48	89	49	99	40
28.....	95	62	90	58	.....	.....	81	47	66	47	96	52	63	52	78	53	91	43	86	49	90	55	102	19
29.....	93	65	88	58	.....	.....	81	46	68	41	94	66	62	54	71	52	91	44	82	49	85	53	99	43
30.....	93	62	89	55	.....	.....	80	48	63	46	95	57	63	50	74	53	91	37	86	49	87	54	106	48
31.....	91	63	86	56	.....	.....	77	45	63	39	93	61	63	51	71	52	86	40	81	48	85	56	103	47
Means.....	90.4	62.0	88.8	56.9	.....	.....	81.8	50.9	65.8	46.1	92.6	56.8	65.0	50.6	78.1	56.1	88.6	44.8*	84.5	52.5	87.5	57.7	99.5	46.7